

Claims

Sub A1 1. A spring adapted for rotational action, comprising:
a first member adapted for attachment to an appliance body member;

a second member spaced apart from the first member and adapted to receive a driving member, wherein when the driving member moves through a selected range of movement, the second element rotates in response thereto; and

at least two leg members connecting the first and second members, wherein when the driving member moves to an end point of its range of movement, having rotated the second member with the leg members attached thereto, the energy stored in the spring thereby tends to return the spring toward its original position.

2. An article of claim 1, wherein the first member is a lower ring member which substantially encircles the driving member and wherein the second member is an upper disc having a central opening through which the driving member is tightly fitted, so that as the driving member moves, the second member moves therewith.

3. An article of claim 2, wherein the first member is an upper ring member which substantially encircles the driving member and wherein the second member is a lower disc member having a central opening through which the driving member is tightly fitted, so that as the driving member moves, the second member moves therewith.

4. An article of claim 1, where the first member and the second member are substantially parallel and remain substantially parallel during rotation of the spring.

5. An article of claim 1, wherein the first member and the second member are non-parallel, such that the second member has both rotational and translational motion in response to movement of the driving member.

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6. An article of claim of claim 1, wherein the leg members include three equally spaced leg members.

7. An article of claim 1, wherein the movement of the driving member is rotational.

8. An article of claim 1, wherein the leg members are straight and tubular.

9. An article of claim 1, wherein the leg members are arcuate in configuration.

10. An article of claim 1, wherein the leg members bifurcate between the upper and lower members.

11. An article of claim 1, wherein the leg members change in size along their length in a preselected manner.

12. An article of claim 1, wherein the second element is smaller in diameter than the first element.

13. An article of claim 1, wherein the leg members and the first element are circular in cross-section.

14. An article of claim 1, wherein the leg members and the first element are elliptical in cross-section.

15. An article of claim 1, wherein the leg members are connected to the first member in a slot arrangement, such that the leg members move a short distance to an end of said slot, at which point the leg members begin to twist.

16. An article of claim 1, including connecting members which extend from the first element and include portions thereof which fixedly connect the first element to the appliance body.

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17. An article of claim 1, wherein the spring has a tubular configuration.

18. An article of claim 1, wherein the spring has a conical configuration.

19. An article of claim 1, wherein the spring forms part of a head portion of a power toothbrush which includes a fluid line which extends through the spring.

20. An article of claim 1, wherein the spring forms part of a head portion of a power toothbrush and wherein the spring includes connecting members which connect the spring to a handle portion of the toothbrush and elements associated with the connecting members for sensing a load on the spring.

21. An article of claim 20, wherein the spring from part of a head portion of a power toothbrush and wherein the spring includes a memory means for identifying said head portion and electrically conducting means connecting said memory means to a handle portion of the toothbrush.

22. A spring adapted for rotational action, comprising:
a drive member adapted to receive a driving member from an appliance body member; wherein when the driving member moves through a selected range of movement, the drive member rotates in response thereto; and

at least two leg members extending from the driving member and including connecting elements at the ends thereof for connecting the leg member and hence the driving member to the appliance body, such that when the driving member moves to an end point of its range of movement, having rotated the second member and the leg members attached thereto, the energy stored in the spring thereby tends to return the spring toward its original position.

23. An article of claim of claim 22, wherein the leg members include three equally spaced leg members.

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24. An article of claim 22, wherein the movement of the driving member is rotational.

25. An article of claim 22, wherein the leg members are straight and tubular.

26. An article of claim 22, including a seal member which seals the spring to the appliance body.

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